Perceptual and Motor Skills, 1987, 64, 828-830. © Perceptual and Motor Skills 1987

POSITIVE CORRELATIONS BETWEEN TEMPORAL LOBE SIGNS AND HYPNOSIS INDUCTION PROFILES: A REPLICATION

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Summary.—48 university students were tested singly. Each student was first asked to complete an inventory that determined the frequency of temporal lobe signs. The subject was then taken into an acoustic chamber and evaluated on the hypnosis induction procedure (HIP) of Spiegel. Positive correlations obtained between the intensity of the sensations of floating and the total induction score and also the number of responses on clusters of items considered as temporal lobe signs. There were no significant correlations between scores on the hypnotic measures and responses for two control clusters of items or a lie scale. The results support the hypothesis that temporal lobe "experiences" and hypnotic susceptibility may share a common factor.

Persinger and DeSano (2) reported significant positive correlations between temporal lobe signs and hypnosis-induction profile scores; however, there were no significant correlations between the induction scores and clusters of control items. This study involved only 27 subjects who were second-year psychology majors. To determine whether the relationship between temporal lobe signs and hypnotic induction was more generalizable and replicable, a second study was designed. In addition, the inductions were completed by another person (first author).

A total of 48 first-year university students participated in this study; they were reinforced with 2% bonus on their final mark in a first-year psychology course. Each student, tested singly, was asked to complete the Personal Philosophy Inventory (1) and then asked to enter an acoustic chamber along with the inductor. After a short rapport period, Spiegel's (3) induction procedure was followed. The total induction score was based upon items including arm levitation, dissociation, and floating evaluations.

At the end of the study (when all students had been tested), responses to the questionnaire were analyzed according to previous procedures (1, 2); two control clusters, a lie cluster and two temporal lobe clusters were calculated by computer. The two control clusters involved normal psychological experiences and normal proprioceptive/introspective experiences; the lie scale involved items from the MMPI. The two temporal lobe clusters included items that refer to temporal lobe ictal-like or interictal-like signs. The first cluster (29 items) contained both types of signs while the second cluster contained references to experiences similar to those displayed during complex partial epileptic

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seizures (CPES); as the central thesis of our studies purports, it is assumed that some form of such seizures occurs in normal people as temporal lobe signs; their frequency and intensity are less than in epileptic populations.

Spearman correlations were completed among the five clusters (2 temporal lobe, 1 lie, and 2 control clusters) and the two hypnotic induction measures: float (given its significance in the previous study) and total induction score. There were no statistically significant *rhos* between either the intensity of the float responses or the total induction score and the responses on either of the control clusters or on the lie cluster. However, the total temporal cluster correlated 0.39 ($df = 46$, $p = .003$) and 0.30 ($p < .05$) with the float and total inductions scores, respectively. The *rhos* between the complex partial epileptic sign cluster and the float and total induction scores were 0.47 ($p < .001$) and 0.30 ($p < .05$), respectively. Partitioning of subjects into three groups of 16 to check internal reliability indicated that the correlations between float and the CPES cluster were 0.53, 0.59, and 0.46, respectively. Similarly, *rhos* between the total temporal lobe scores and the induction scores were 0.31, 0.28, and 0.35, respectively.

Both factor analysis and multiple regression indicated that the correlation between float and the CPES cluster was due primarily to five items from the latter; they were "There have been times when I have stared at an object and it appeared to become larger and larger", "When I have a tough decision to make, a sign will be given and I will know what to do", "Sometimes in the early morning hours between midnight and 4:00 a.m., my experiences are very meaningful", "When I walk upstairs, I sometimes note a strange smell from nowhere", and "I have had experiences when I felt as if I were somewhere else". The mean Pearson r between the cluster and each of its 16 items was 0.49 (range 0.22 to 0.71).

These results are similar to the previous work by Persinger and DeSano (2) who noted a correlation of 0.49 between the total induction score and the major temporal lobe cluster. The smaller magnitude of the relationship in the present study might be related to the different populations. The mean induction score for the first group was 5.2 $\pm$ 3.2 while the mean induction score for the present group was 6.6 $\pm$ 2.5. A t test indicated that this group showed significantly ($p < .05$) higher induction scores; this factor may have reduced the scatter of scores within the population.

However, the scores on the two control clusters and temporal lobe clusters were not significantly different ($p > .05$) from either those of the previous or other populations. The percentage of affirmative response for the total temporal lobe cluster and the CPES clusters were 35 $\pm$ 15% and 33 $\pm$ 21%, respectively. These results replicate those of the previous study and indicate that hypnotic induction is correlated with the frequency of temporal lobe signs.

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Accepted March 16, 1987.